

# Computer Assisted Enclosures for Sloshing Frequencies

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The calculation of the frequencies  $\omega$  for small oscillations of an ideal liquid in a container results in a Stekloff eigenvalue problem.

A procedure for calculating lower and upper bounds to the eigenvalues of is presented. The calculation of upper bounds is done by means of the well known Rayleigh-Ritz procedure. For the lower bound computation Goerich's generalization of Lehmann's method is applied, trial functions are constructed with finite elements. It is shown that Lehmann's method can not be applied in this context, whereas a specification of Goerich's method is possible.

Rounding errors in the computation are controlled with interval arithmetic.